

PATENT CLAIMS

1. Method for applying advertising media to bottles encompassing the following method steps:

- continuous conveyance of caps (1) or sealing parts for bottles to pre-specified target positions;
- application of the labels (13) constituting advertising media to said caps (1) or sealing parts in the target positions;
- subsequent sterilization of said caps (1) or sealing parts with said applied labels (13).

10 2. Method in accordance with claim 1, characterized in that said caps (1) or sealing parts are applied to the bottles before the continuous conveyance to the target positions.

3. Method in accordance with claim 1, characterized in that said caps (1) are conveyed to said target positions as separate units.

15 4. Method in accordance with any of claims 1 - 3, characterized in that the sterilization occurs using spraying of said caps (1) or sealing parts by means of disinfectants.

5. Method in accordance with claim 4, characterized in that peracetic acid or hydrogen peroxide is used for the disinfectant.

6. Method in accordance with any of claims 1 - 3, characterized in that said 5 sterilization occurs by means of UV radiation.

7. Method in accordance with any of claims 4 - 6, characterized in that all of the surfaces of said caps (1) or sealing parts are sterilized.

8. Method in accordance with any of claims 1 - 7, characterized in that covers (3) of caps (1) are provided as sealing parts and are applied after 10 applying said labels (13) to cap body parts (2).

9. Method in accordance with claim 8, characterized in that said covers (3) are snapped, locked, or pushed onto said cap body parts (2).

10. Method in accordance with claim 9, characterized in that said covers (3) are detachably joined to said cap body parts (2).

11. Method in accordance with any of claims 1 - 10, characterized in that said caps (1) are embodied as screw-on caps or rolled-on caps.

12. Method in accordance with claim 1, characterized in that said caps (1) constitute crown seals or tube caps.

5 13. Method in accordance with any of claims 1 - 12, characterized in that said caps (1) comprise metal and/or plastic.

14. Method in accordance with any of claims 1 - 13, characterized in that said labels (13) are embodied as self-stick labels.

10 15. Method in accordance with any of claims 1 - 14, characterized in that said labels (13) comprise paper and/or plastic.

16. Method in accordance with any of claims 1 - 15, characterized in that said labels (13) have a plurality of carrier coatings.

17. Method in accordance with any of claims 1 - 16, characterized in that said labels (13) have printed material.

18. Method in accordance with claim 17, characterized in that said printed material is applied to said labels (13) in a letterpress printing, digital printing, screen printing, and/or offset printing process.

5 19. Method in accordance with any of claims 1 - 18, characterized in that said labels (13) have coatings.

20. Method in accordance with claim 19, characterized in that diffusion films, reflective films, or fluorescent films are applied to said labels (13).

21. Method in accordance with any of claims 19 or 20, characterized in that rub-off coatings are applied to said labels (13).

10 22. Method in accordance with any of claims 19 - 21, characterized in that temperature-sensitive color coatings are applied to said labels (13).

23. Method in accordance with any of claims 1 - 22, characterized in that said labels (13) have embossing and/or punches.

24. Method in accordance with any of claims 1 - 23, characterized in that the bottles are mineral water, fruit juice, beer, or lemonade bottles.

25. Apparatus for performing the method in accordance with any of claims 1 - 24, characterized by conveying means for transporting caps (1) applied to 5 bottles to pre-specified target positions and by at least one labeling machine (12) for applying labels (13) constituting the advertising media to the top sides of the caps (1) situated in the target positions, whereby the at least one labeling machine (12) can be integrated into a bottle filling system as a modular unit.

26. Apparatus for performing the method in accordance with any of claims 1 - 25, characterized by at least one separating unit for separating said caps (1) or 10 sealing parts, conveying means for feeding said separated caps (1) or sealing parts into pre-specified target positions, at least one labeling machine (12) for applying labels (13) constituting said advertising media to said caps (1) or sealing parts situated in said target positions, at least one disinfecting unit (20) 15 in which said caps (1) or sealing parts provided with said labels (13) are transported along pre-specified paths and subjected to UV radiation or disinfectants, and at least one supply container (22) to which said sterilized caps (1) or sealing parts can be fed via an air-tight connector (21) for sterile storage.

27. Apparatus in accordance with claim 26, characterized in that said disinfecting unit (20) has one conveyor (25) on which said caps (1) are conveyed along a pre-specified path and at least one spray unit (33) by means of which said caps (1) or sealing parts conveyed with said conveyor (25) are subjected on 5 all sides to a disinfectant.

28. Apparatus in accordance with claim 27, characterized in that at its output said disinfecting unit (20) has a compressed air (20a) by means of which said sterilized caps (1) or sealing parts are exposed to purified air.

29. Apparatus in accordance with claim 26, characterized in that said 10 disinfecting unit (20) has a conveyor (25) and UV radiation sources (23) that emit UV radiation, whereby said caps (1) or sealing parts are transported at pre-specified intervals by means of said conveyor (25) past said UV radiation sources (23) for exposure to UV radiation on all sides.

30. Apparatus in accordance with any of claims 26 - 29, characterized in that 15 said supply container (22) constitutes a plastic bag (28) borne in an octabin (29), which is connected by means of a flange (27) forming said air-tight connector (21) to said disinfecting unit (20).

31. Apparatus in accordance with any of claims 26 - 30, characterized in that said separating unit for said caps (1) or sealing parts constitutes a centrifugal sorter (8).

32. Method in accordance with claim 31, characterized in that said caps (1) or sealing parts separated in said centrifugal sorter (8) are transported on a conveyor segment (9) that constitutes the conveying means and that has at least one switch (10) by means of which caps (1) or sealing parts are fed in parallel to a plurality of labeling machines (12, 12') for applying labels (13).
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33. Method in accordance with claim 32, characterized in that said labeling machines (12, 12') are identical.
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34. Method in accordance with any of claims 32 or 33, characterized in that each labeling machine (12, 12') has sensors for detecting the target positions of said caps (1) or sealing parts for applying said labels (13).

35. Method in accordance with any of claims 33 or 34, characterized in that each labeling machine (12, 12') has mechanical means for guiding said caps (1)
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or sealing parts, and these are used to transport said caps (1) or sealing parts at a pre-specified rate to the target positions for applying said labels (13).